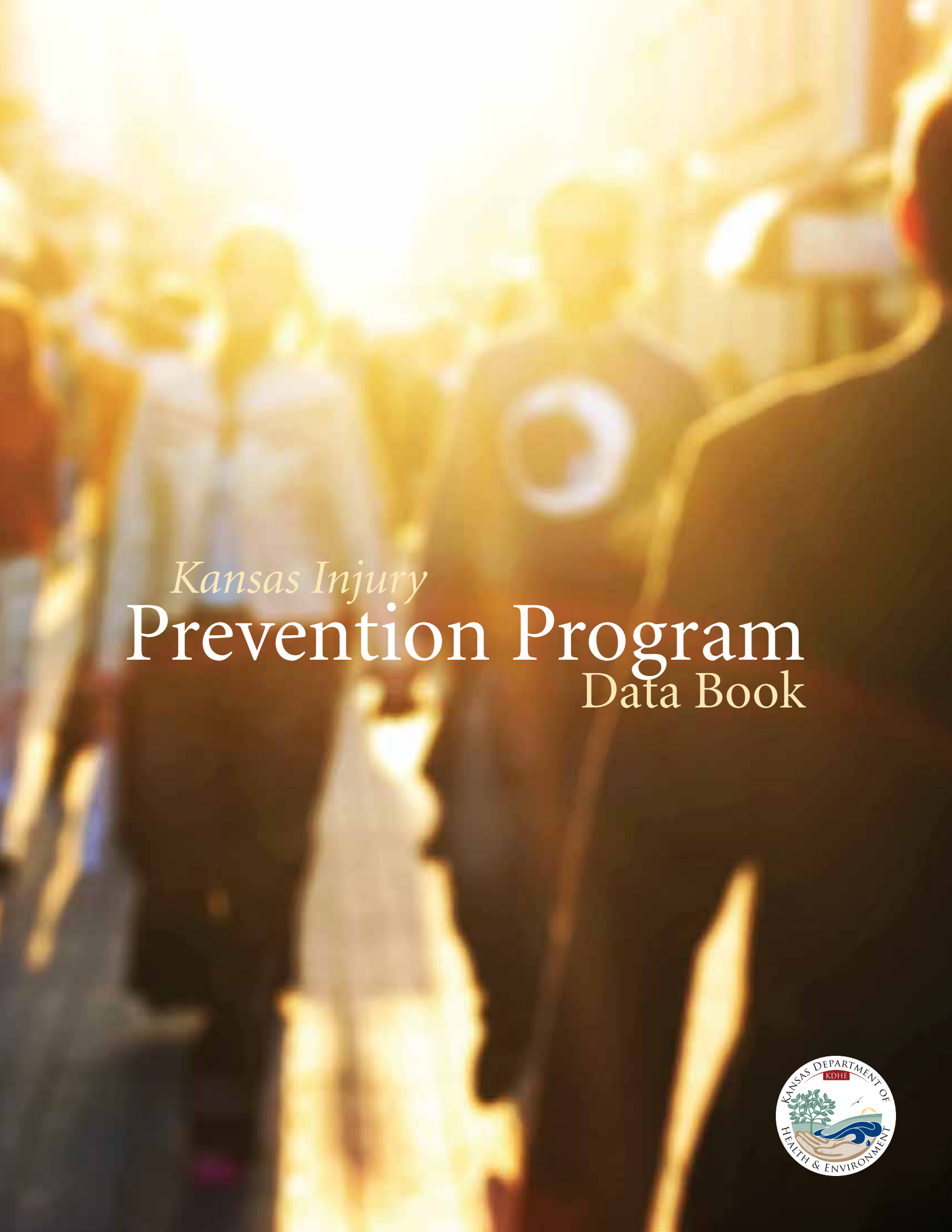

Kansas Injury

Prevention Program

Data Book

Kansas Department of Health & Environment
KDHE

Kansas Department of Health & Environment
Bureau of Health Promotion
Office of Injury Prevention & Disability Programs

Injury in Kansas

Produced by the Injury Prevention Program
2009

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Centers for Disease Control and Prevention

The Bureau of Health Promotion, Injury Prevention Program
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Table of Contents

Executive Summary

Injury is among the leading causes of death and hospitalization in Kansas. Injuries are preventable and making injury a top public health priority assures reduction in the injury burden in Kansas.

Each year, about 1,600 Kansans die as a result of injury.

- In 2006, the leading cause of injury mortality in Kansas was due to motor vehicle crashes. There were 427 deaths in 2006.
- Unintentional falls were the second leading cause of injury mortality in 2006 with 219 deaths.

Unintentional falls are the leading cause of hospitalization due to injury.

- Unintentional poisonings were the third leading cause of injury mortality in 2006.

Unintentional poisonings have increased faster than any other type of injury.

- Injury is responsible for more years of potential life lost in Kansas than cancer, heart disease, or stroke. For persons under 34 years of age, injury is the leading cause of death in Kansas.
- Unintentional injury hospitalization charges exceeded $348 million in 2005.

Kansas can take steps to minimize the risks of injury by modifying the environments, products, policies, and behaviors that facilitate or fail to prevent injury. These steps begin with understanding the impact and causes that lead to injury.

Introduction

Injury is the fifth leading cause of death in Kansas, and is also among the leading causes of hospitalization. It is typical to consider some causes of death—cancer, heart disease, stroke—as mainly affecting Kansans in older age groups. However, everyone is affected by injury, regardless of age, sex, or race. In fact, injury is the leading cause of death among Kansans under 34 years of age. About 1,600 Kansans die each year as the result of injury; about 1,100 of these are unintentional injuries. Kansas Department of Health and Environment, Bureau of Health Promotion, Injury Prevention Program, in cooperation with the Centers for Disease Control and Prevention (CDC), has implemented a statewide injury surveillance and prevention program in the effort to reduce the burden of injury among Kansans. This means that injury deaths and hospitalizations are tracked over time in an effort to understand the impact and causes of injury in Kansas, and that knowledge is used to promote efforts to prevent injuries in the community.

DEFINING INJURY

It is common to consider injuries accidents or random events. However, this implies that injuries are unpredictable and unpreventable. Actually, injuries are preventable (and at the community level are also predictable), and there is a need

to make injury prevention a top public health priority and recognize that injuries are preventable. Although injuries can be categorized in multiple ways—where they occur, how they occur, etc.—it is typical to categorize injuries in terms of mechanism and intent. Mechanism (or cause) typifies how the injury occurred—for instance, by motor vehicle, firearm, struck by an object, by falling, etc. Intent is classified as unintentional or intentional (or else unknown, undetermined). While unintentional injuries often result as a form of rapid transfer of energy from object to person (e.g. being struck by a motor vehicle), intentional injuries are the result of intentional harm imposed upon one person by another, or upon oneself (e.g. suicide).

INJURY AS A PUBLIC HEALTH ISSUE

Public health is a population-based health approach by which health issues are addressed at the community level, versus at the individual level. The public health approach to injury prevention is a process that involves identifying and defining the problem, identifying risk and protective factors, developing and testing prevention strategies, and assuring widespread adoption of effective strategies.

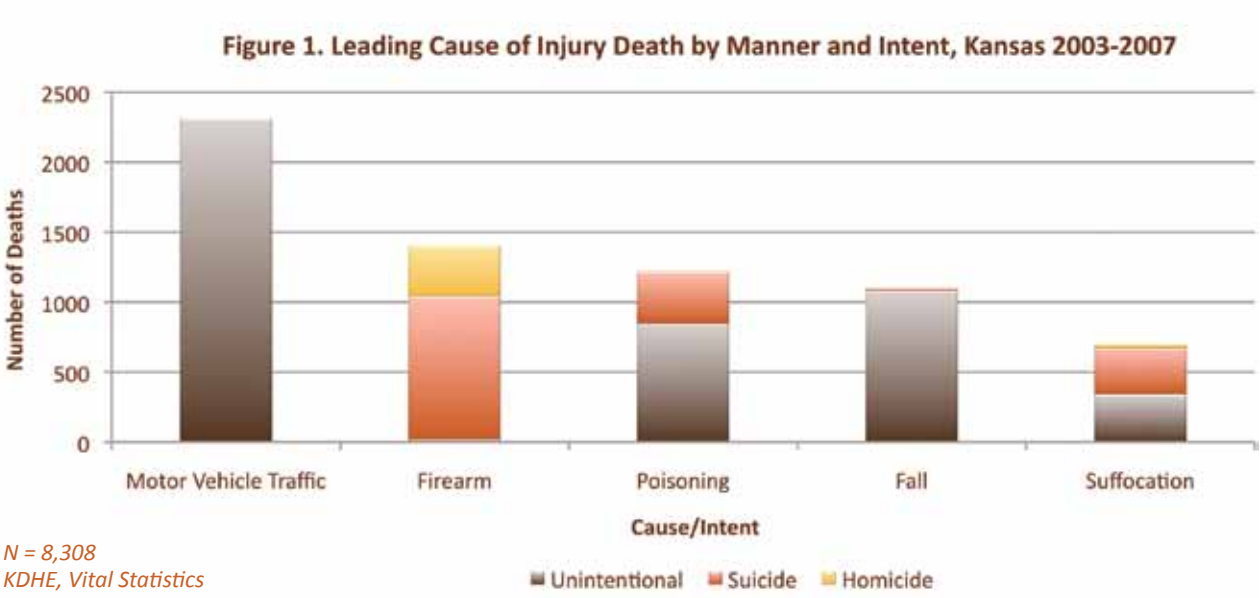
Rather than address single types of injury that occur to individuals on a one to one basis, broad causes and prevention solutions are the focus of injury prevention in public health. Instead of focusing on individuals and the treatment of individual injuries as they arise, it is the whole community, the community's whole health, and community-level prevention which defines the public health approach. Sometimes, prevention at the community level involves changing the environment in which injuries occur—for example: installing traffic signals at intersections, or requiring certain products to be fire safe. At other times, prevention at the community level involves education—such as informing school programs about preventing head injuries, or providing information to guide changes in health policies or laws. Although the public health workforce may not always directly provide prevention services, public health agencies identify the important conditions and patterns that contribute to injury at the community level, and identify and leverage solutions through community partnerships to promote prevention.

Fact Sheet

Injury-Related Mortality in Kansas, 2003-2007

- Motor vehicle-related crashes and firearms accounted for half of all injury deaths in Kansas between 2003 and 2007.
- The majority of deaths due to an injury were due to unintentional injury (69%).
- Suicides accounted for 22% of the injury deaths, while homicides accounted for 7%, and 2% were due to deaths of undetermined intent and/or those involving legal/war cases.
- Motor vehicle crashes were the number one cause of unintentional injury deaths in Kansas; falls ranked 2nd in the number of unintentional injury deaths.
- Overall, the rate of injury death in Kansas is approximately 2 times higher among males than among females.
- The highest rates of motor-vehicle -related injury deaths occurred among males aged 15-24 years and males aged 75 years and older.
- The age group with the highest death rates from unintentional injuries was persons aged 85 years and older.
- Suicide rates were highest among males aged 75 years and older.

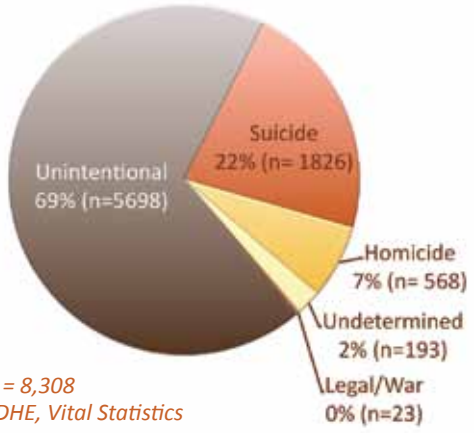
All Injuries



N = 8,308
KDHE, Vital Statistics

- Motor vehicle-related injuries, firearm injuries, and poisoning are the three leading causes of injury deaths in Kansas.
- Between 2003 and 2007, these causes accounted for approximately 60 percent (27.9 percent motor vehicle, 17.3 percent firearm, and 16.3 percent poisoning) of all injury deaths.
- Majority of the deaths due to motor vehicle were classified as unintentional, whereas most of the deaths due to firearm were classified as suicides and homicides.

Figure 2. Injury Mortality by Intent Kansas 2003-2007



N = 8,308
KDHE, Vital Statistics

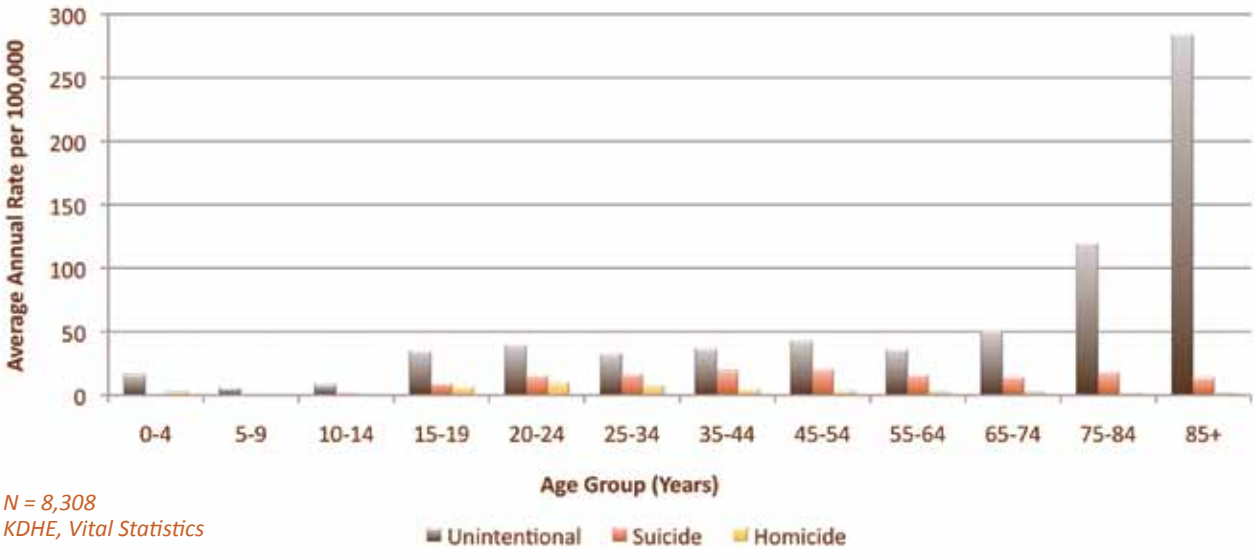
- Injury may be classified by intent, unintentional injuries normally referred to as accidents or intentional injuries (for example homicide and suicide).
- The majority of the injury deaths are classified as unintentional. Between 2003 and 2007, nearly 70 percent of all injuries were unintentional; approximately 29% of were due to suicide and homicide.
- There were three times as many deaths due to suicide (n= 1826) compared to homicide (n=568).

Injuries Affect Everyone

"The risk of injury is so great that most persons sustain a significant injury at some time during their lives."

US Department of Health and Human Services, 2000

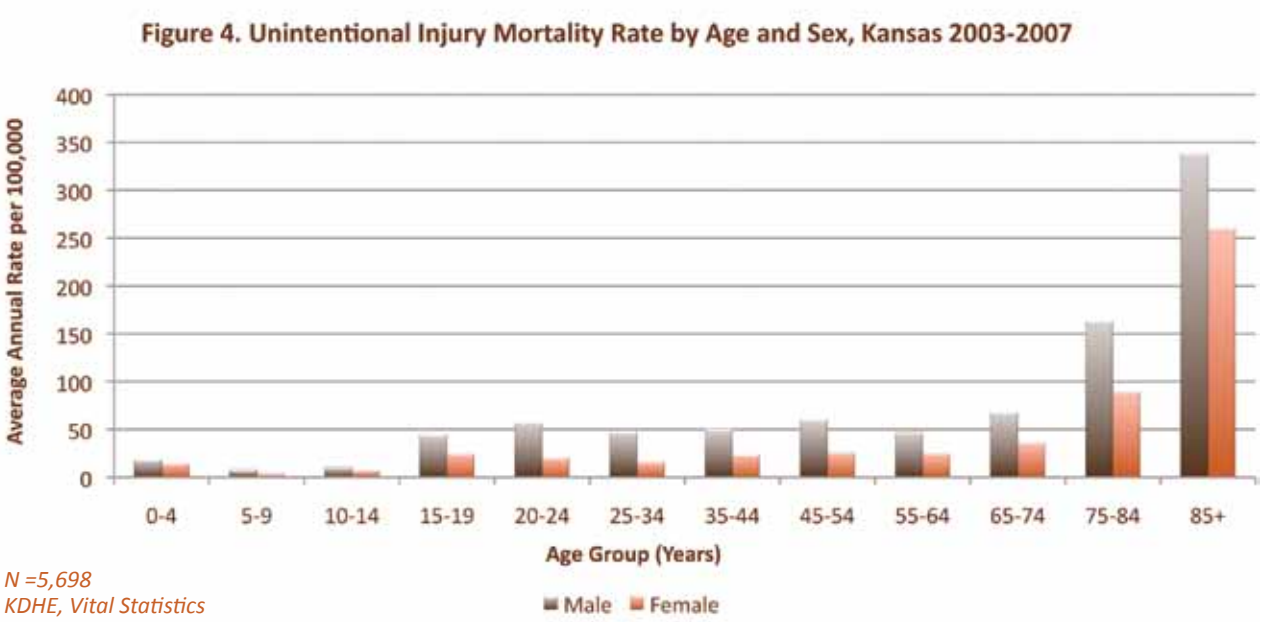
Figure 3. Injury Mortality Rate by Intent and Age, Kansas 2003-2007



N = 8,308
KDHE, Vital Statistics

- For every age group, unintentional injuries were the most frequent form of injury mortality.
- Persons ages 85 years and older had high rates of deaths due to unintentional injuries. Between 2003 and 2007, 330 out of every 100,000 Kansans ages 85 years and older died as a result of an unintentional injury.
- Persons ages 75 to 84 years had the second highest rate of unintentional injury deaths. High rates were also observed among Kansans ages 20 to 24 years, 45 to 54 years, and those ages 65 to 74 years.

Unintentional Injuries



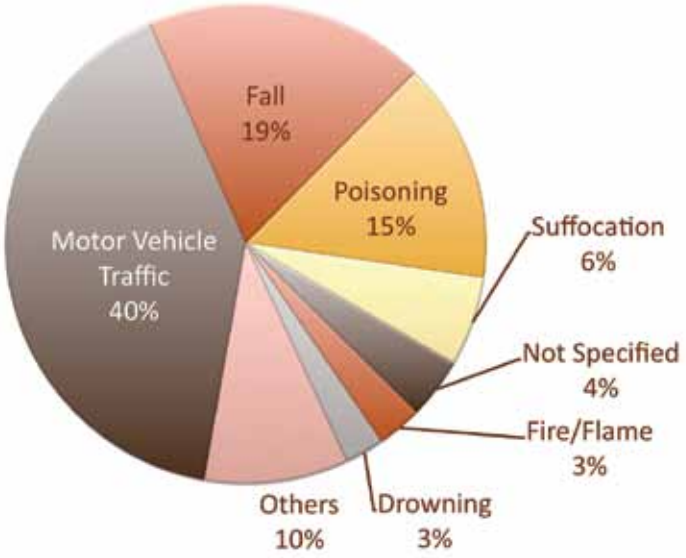
N =5,698
KDHE, Vital Statistics

- Between 2003 and 2007, a total of 5,693 Kansans died due to unintentional injuries.
- Males and females 75 years and older had the highest rates of deaths due to unintentional injuries.
- Males had a higher rate of death due to unintentional injury in every age group when compared to females.

"If a disease were killing our children at the rate unintentional injuries are, the public would be outraged and demand that this killer be stopped."

C. Everett Koop, MD, ScD, former Surgeon General of the United States and former Chairman of National Safe Kids Campaign, SafeKids Voice, Winter 2003, p.11

Figure 5. Unintentional Injury Mortality by Mechanism of Injury, Kansas 2003-2007

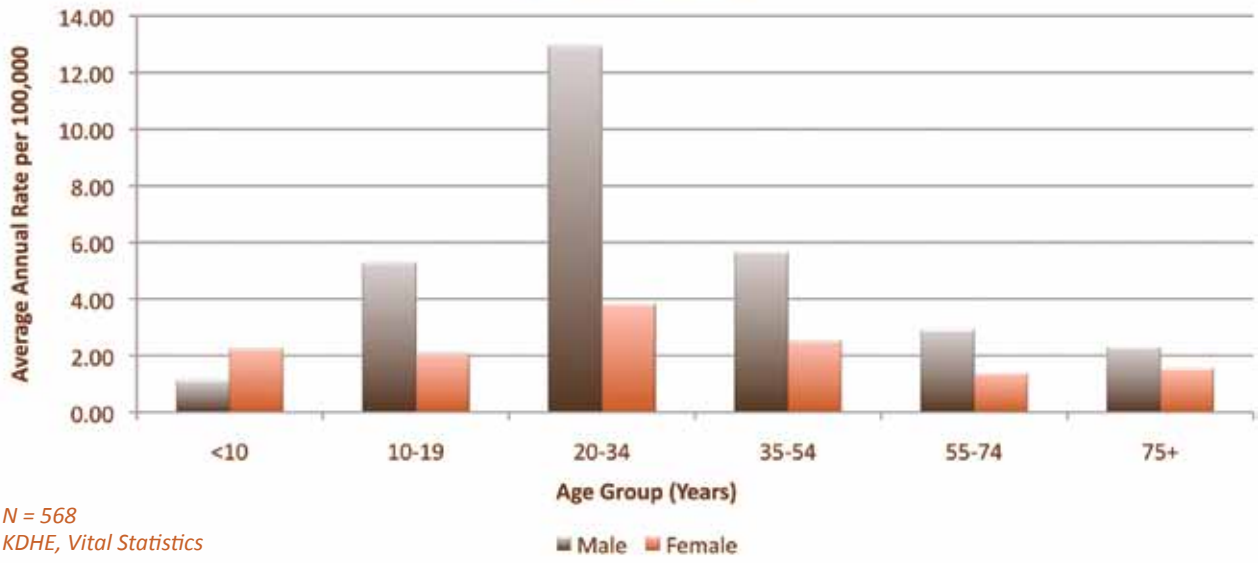


N = 5,698
KDHE, Vital Statistics

- Most unintentional injury deaths were due to motor vehicle crashes. A total of 2,314 Kansans were killed in a motor vehicle-related incident between 2003 and 2007.
- Falls were the second leading cause of unintentional injury deaths in Kansas. One thousand and eighty two (1,082) persons were unintentionally killed in a fall-related incident.
- Poisoning deaths were the third leading cause of unintentional injury deaths in Kansas. Eight hundred and forty-eight (848) persons were unintentionally killed as a result of poisoning.

Homicide

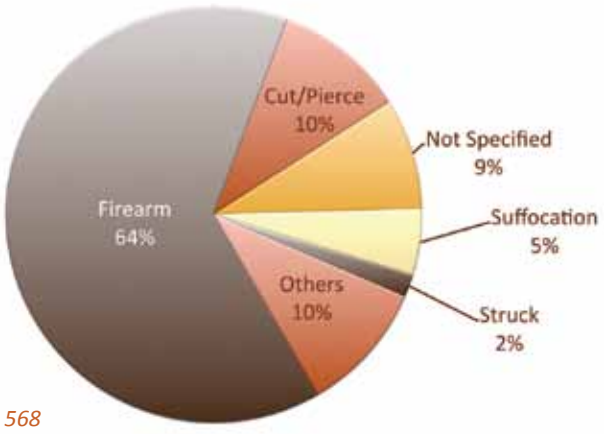
Figure 6. Homicide Rate by Age and Sex
Kansas 2003-2007



N = 568
KDHE, Vital Statistics

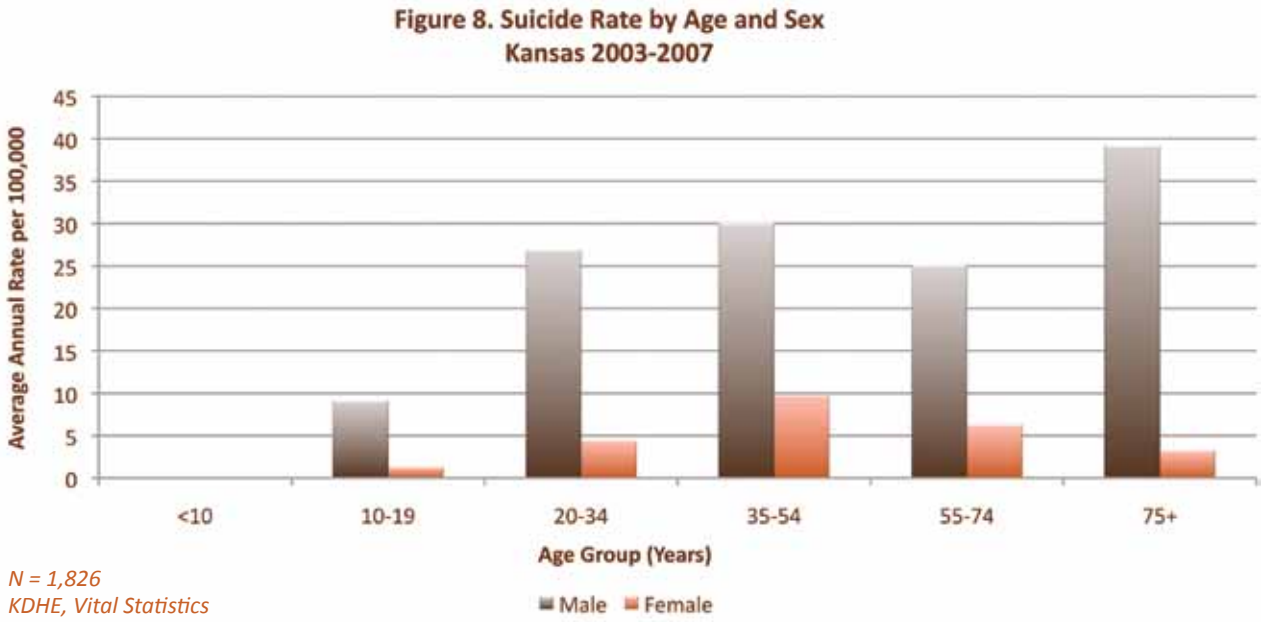
- Between 2003 and 2007, 568 Kansas deaths were classified as homicide.
- The rate of homicide is highest among Kansans ages 20 to 34 years. Homicide rate is approximately three times higher among males than among females in the 20 to 34 year old age group.
- Among all age groups, the rate of homicide in Kansas is approximately two times higher among males than among females.

Figure 7. Homicide by Mechanism of Injury
Kansas 2003-2007



N = 568
KDHE, Vital Statistics

- Firearms were the most common weapons used to commit homicide in Kansas between 2003 and 2007.
- Between 2003 and 2007, firearms killed a total of 364 Kansans.
- Among Kansans killed by a firearm, 401 were male and 167 were female. Most of these victims were between the ages of 20 and 24 years.

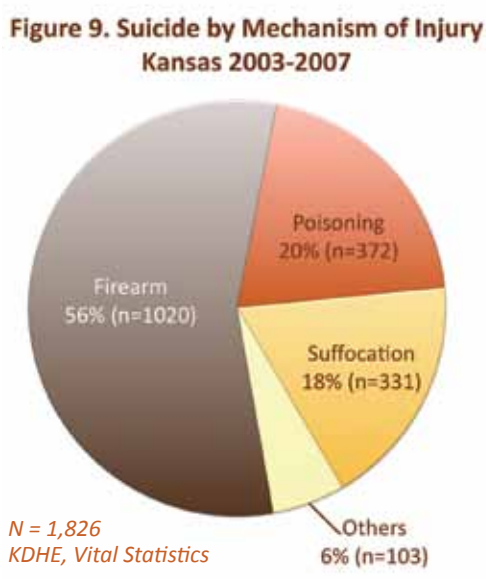


N = 1,826
KDHE, Vital Statistics

• A total of 1,826 Kansans committed suicide between 2003 and 2007.

• The rate of suicide is approximately four times higher among males than among females.

• The highest rate of suicide occurred among Kansans ages 75 years and above.



N = 1,826
KDHE, Vital Statistics

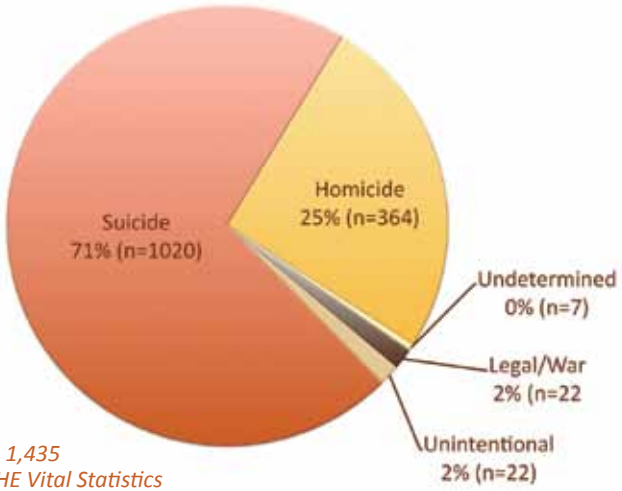
• The majority of suicides (56 percent, n=1,020) were committed with a firearm.

• Poisoning (20 percent, n=372) was the second most common mechanism by which Kansans committed suicide.

• Suffocation (18 percent, n=331) was the third mechanism by which Kansans committed suicide.

Firearms

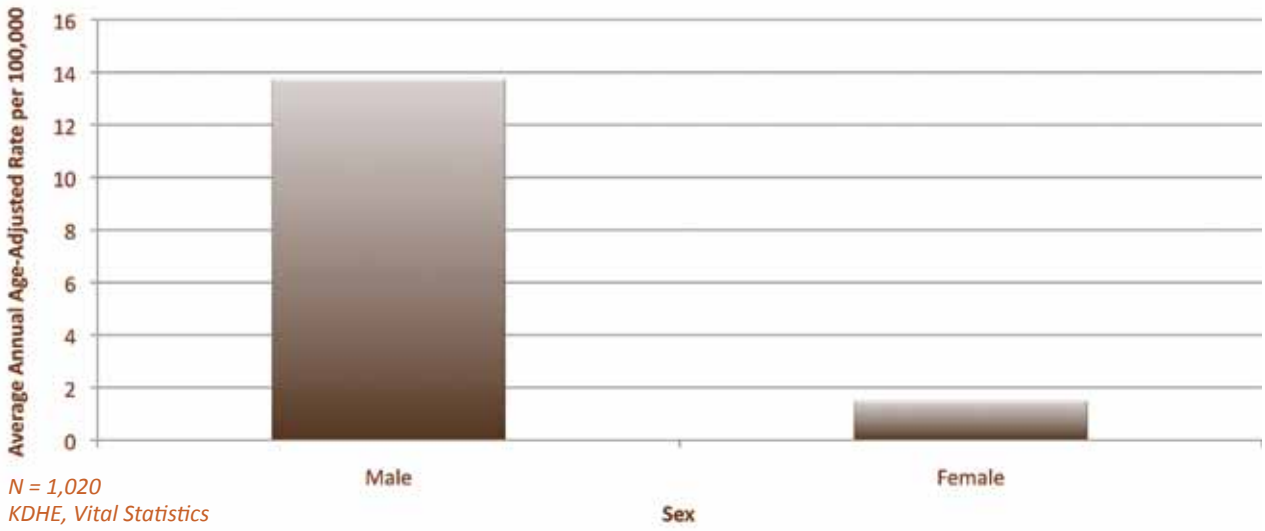
Figure 10. Firearm-Related Deaths by Intent
Kansas 2003-2007



N = 1,435
KDHE Vital Statistics

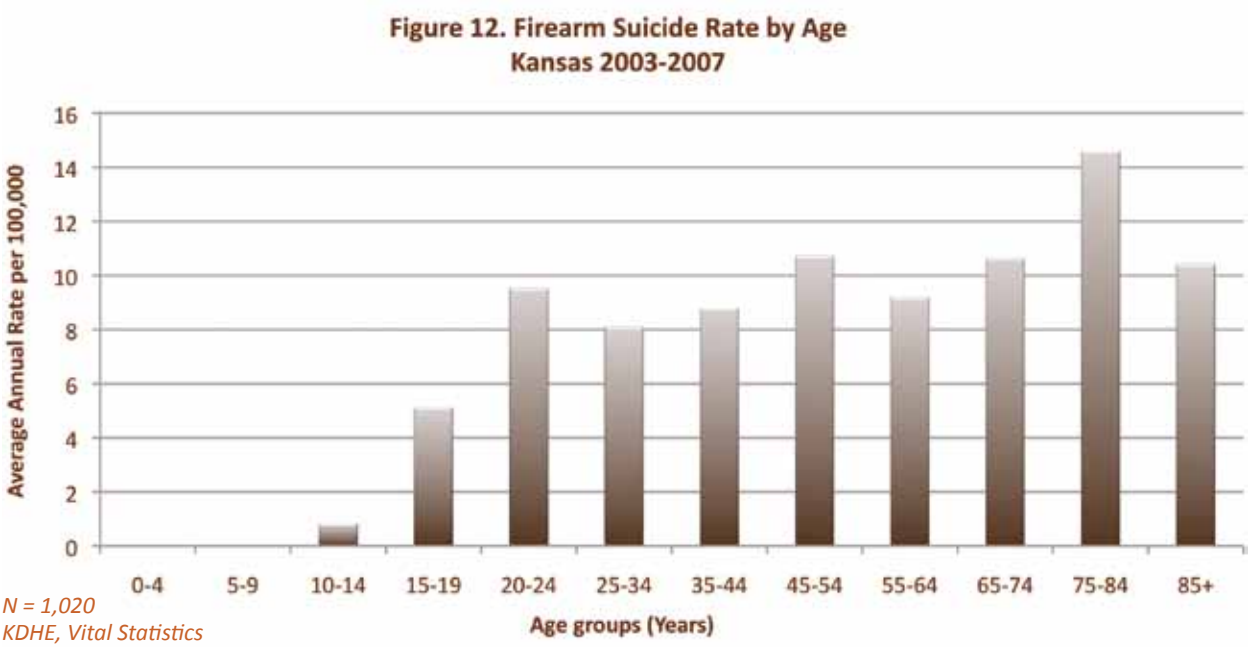
- Between 2003 and 2007, a total of 1,435 Kansans died due to firearm injuries.
- Firearms accounted for the majority of deaths due to suicide and homicide.
- Between 2003 and 2007, 22 Kansans were unintentionally shot and killed.

Figure 11. Firearm Suicide Rate by Sex
Kansas 2003-2007



N = 1,020
KDHE, Vital Statistics

- The rate of firearm suicide was approximately nine times higher among males than among females.
- Among the 1,020 Kansans who committed suicide using a firearm, 89.9 percent (n=917) were males and 10.1 percent (n=103) were females.

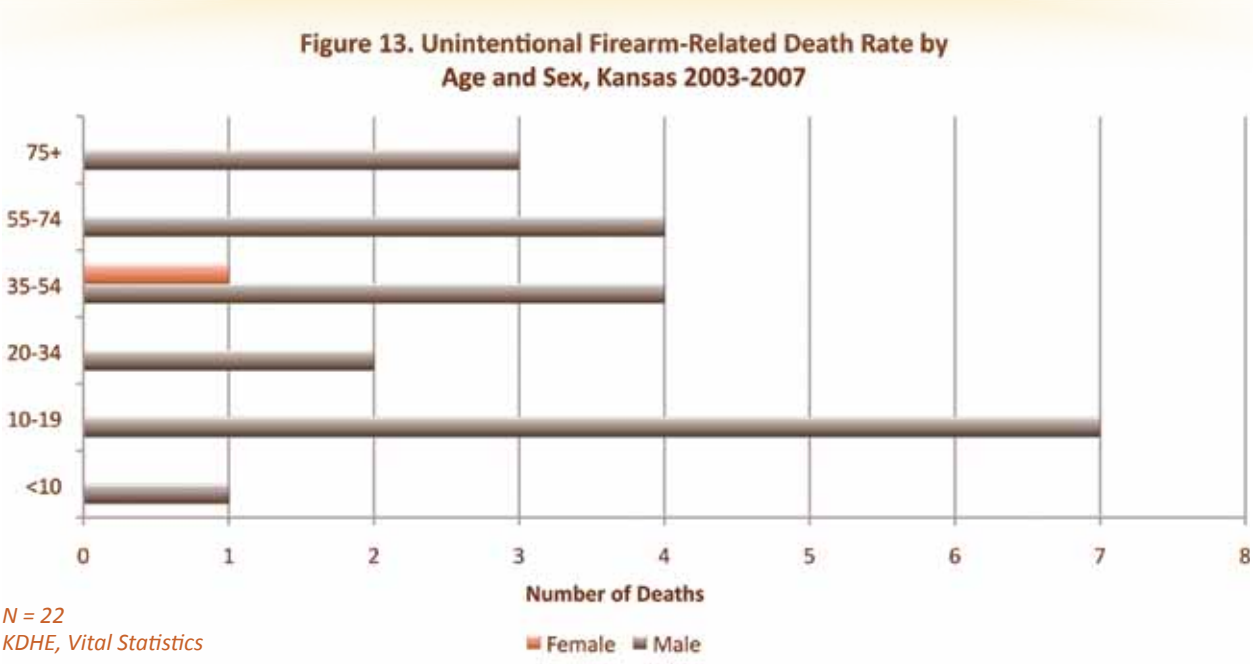


N = 1,020
KDHE, Vital Statistics

- Between 2003 and 2007, the highest rate of firearm-related suicide occurred among Kansans ages 75 to 84 years.

- High rates were also observed among Kansans ages 20 to 24 and those 85 years and older.

- Sixty Kansans ages 10 to 19 years committed suicide with the use of a firearm between 2003 and 2007.



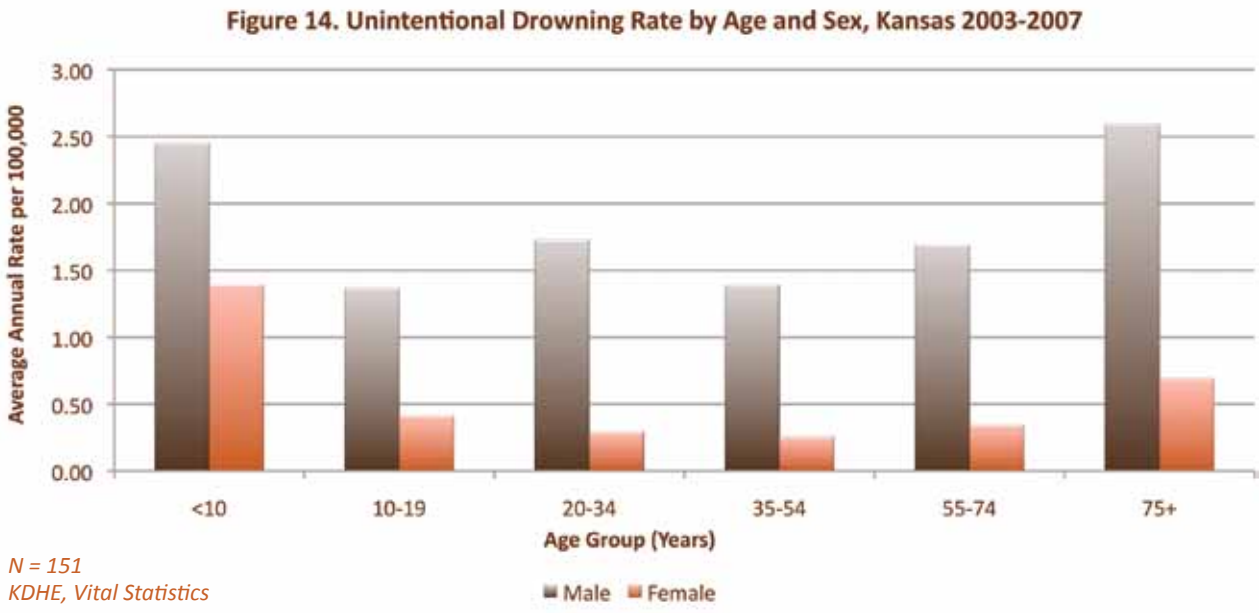
N = 22
KDHE, Vital Statistics

- Between 2003 and 2007, 22 Kansans died as a result of an unintentional gunshot wound.

- Ninety-five percent of these victims were males.

- Deaths due to unintentional firearm injuries were highest among Kansans ages 10 to 19 years and lowest among Kansans less than 10 years old.

Drowning



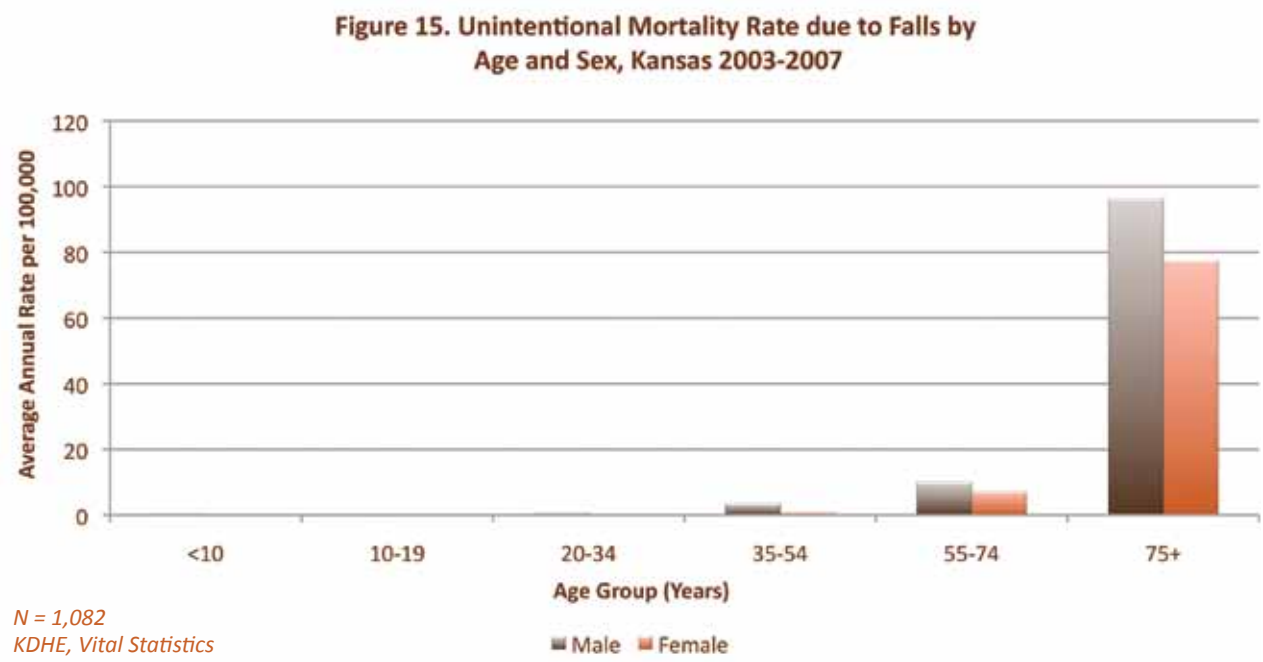
N = 151
KDHE, Vital Statistics

- Between 2003 and 2007, 151 Kansans died from unintentional drowning.
- The rate of drowning was approximately 3.5 times higher among males than among females.
- The highest rate of drowning occurred among male Kansans ages 20 to 34 years, while the lowest rate of drowning occurred among female Kansans ages 35 to 74 years.

"Injury is the principal public health problem in America today."

William Foege, Preface to Injury in America, 1985

Falls



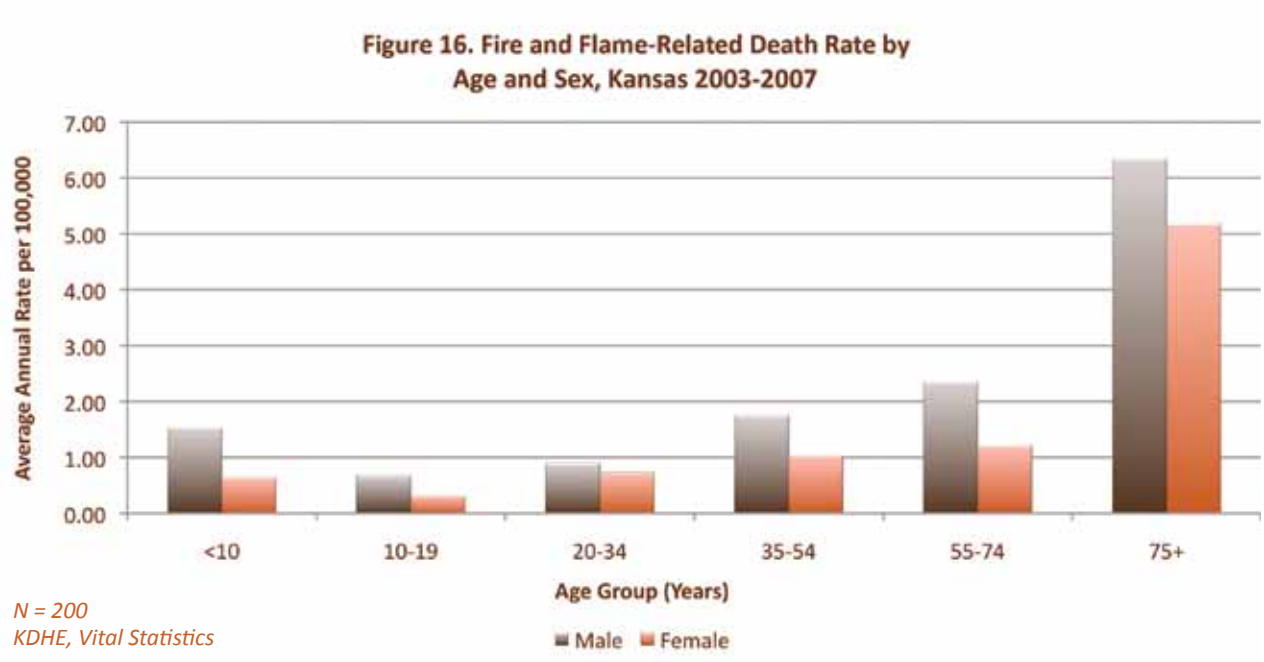
N = 1,082
KDHE, Vital Statistics

• Between 2003 and 2007, 1,082 Kansans died as a result of unintentional falls.

• The highest rate of deaths due to falls occurred among males 75 years and older.

• Relatively few fall-related deaths occurred in persons younger than 19 years.

Fire/Flame

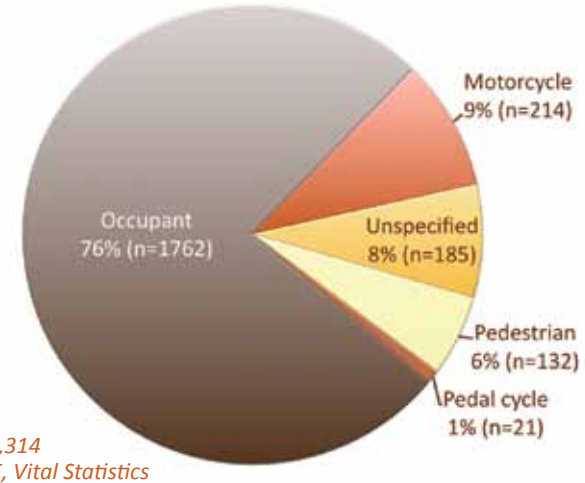


N = 200
KDHE, Vital Statistics

- A total of 200 Kansans died in a fire and flame-related incident between 2003 and 2007.
- The rate of fire and flame-related death is approximately two times higher among males compared to females.
- Majority of the fire and flame-related deaths occurred among Kansans 75 years and above.

Motor Vehicle/Traffic

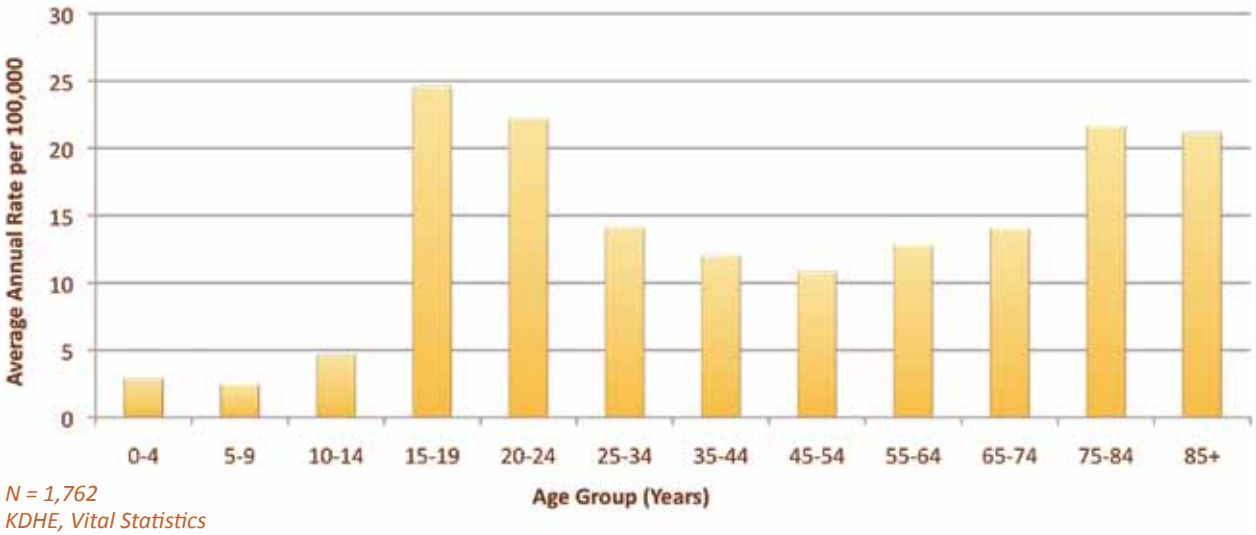
Figure 17. Motor Vecicle-Related Deaths by Cause Kansas 2003-2007



N = 2,314
KDHE, Vital Statistics

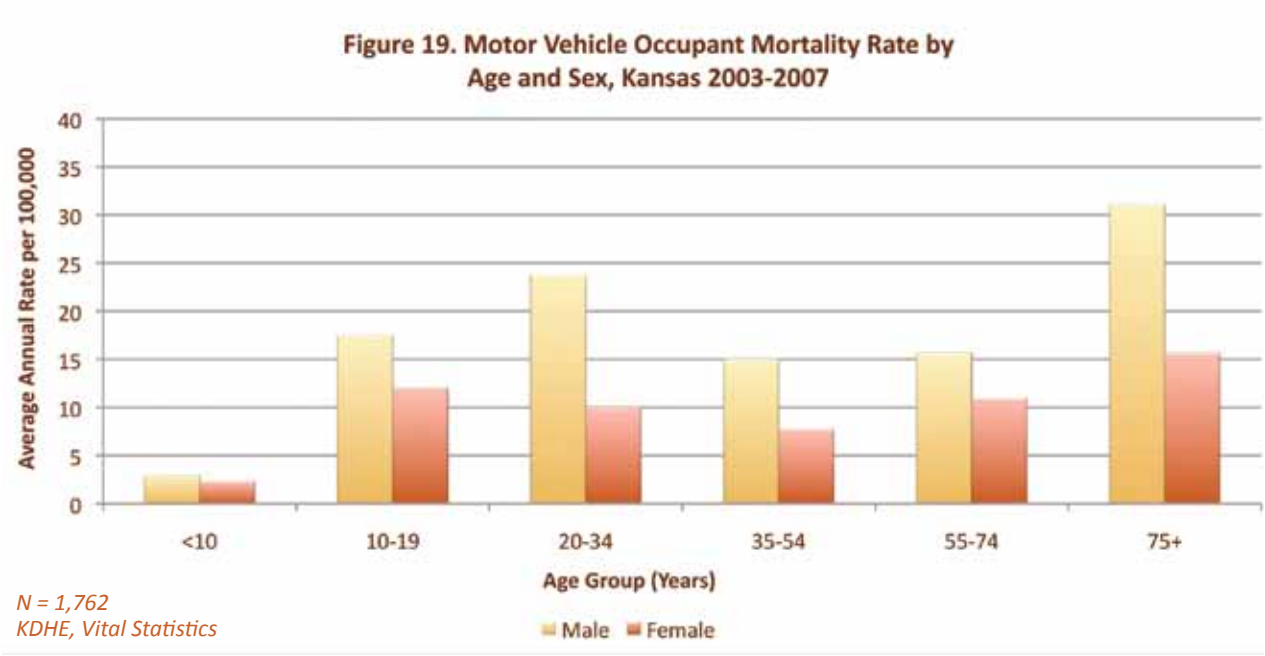
- Between 2003 and 2007, 416 persons younger than 19 years were killed in motor vehicle-related incidents.
- The majority of deaths involving motor vehicle crash were among drivers or occupants of motor vehicles.
- Motor vehicle-related deaths killed 132 pedestrians in Kansas between 2003 and 2007.

Figure 18. Motor Vehicle Occupant Death Rate by Age, Kansas 2003-2007



N = 1,762
KDHE, Vital Statistics

- The highest death rates from motor vehicle crashes occurred among occupants ages 15 to 24 years and those 75 years and older.
- A total of 1,762 Kansans were involved in a motor vehicle occupant fatality between 2003 and 2007.
- Between 2003 and 2007, 51 children less than 10 years old were involved in a motor vehicle occupant fatality.

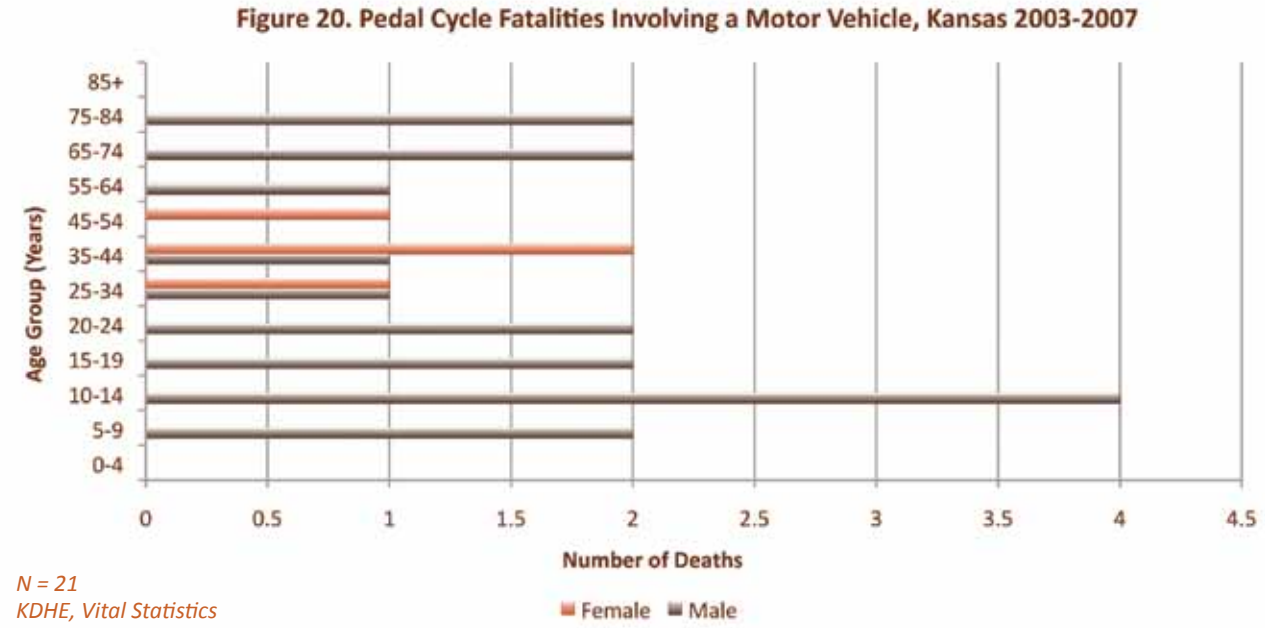


N = 1,762
KDHE, Vital Statistics

- Between 2003 and 2007, 1,119 males and 643 females died as an occupant or driver in a motor vehicle-related crash.

- Among those ages 20 to 34 years, the rate of motor vehicle occupant mortality is approximately two times higher for males than for females.

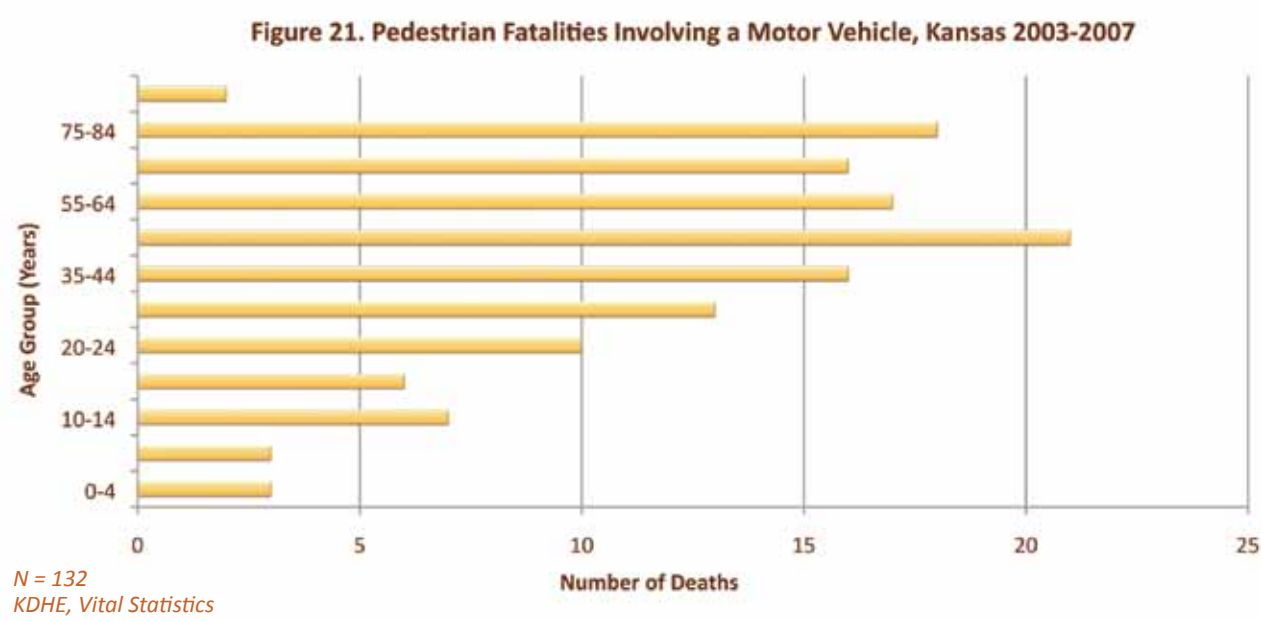
- The highest motor vehicle occupant mortality rate occurred among adults 75 years and above.



N = 21
KDHE, Vital Statistics

- Between 2003 and 2007, a total of 21 Kansans died in pedal cycle-related incidents involving a motor vehicle.

- The highest number of deaths occurred between the ages of 5 to 9 years old.

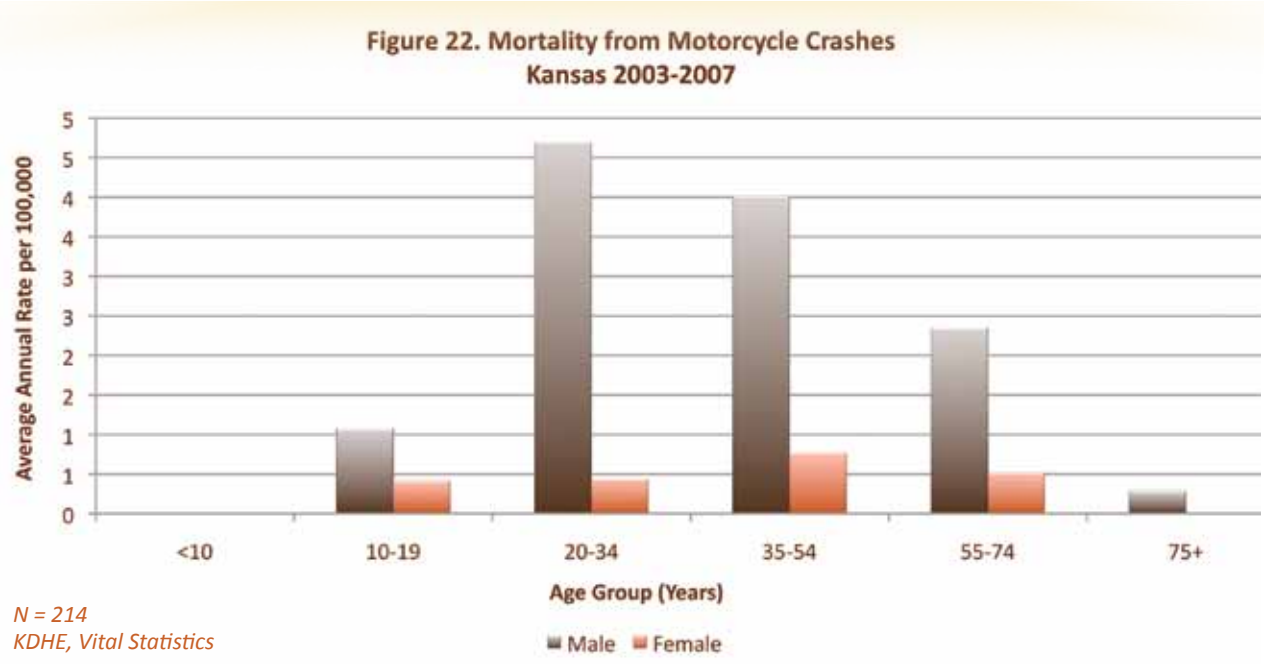


N = 132
KDHE, Vital Statistics

• Between 2003 and 2007, 132 pedestrians were killed after being struck by a motor vehicle.

• The highest number of deaths occurred among those ages 45 to 54 years and those 75 to 84 years old.

• Between 2003 and 2007, six children under age 10 were killed, as pedestrians, after being struck by a motor vehicle.



N = 214
KDHE, Vital Statistics

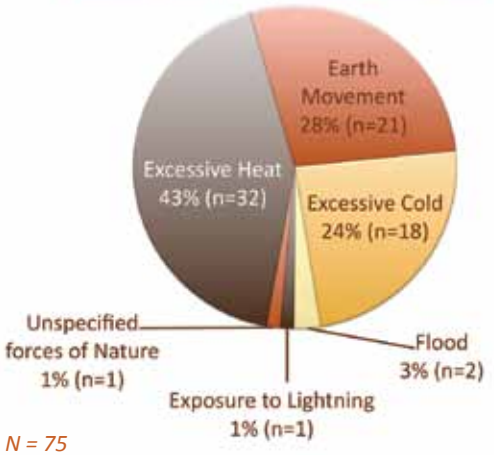
• Between 2003 and 2007, 214 Kansans died from a motorcycle traffic crash.

• The rate of motorcycle traffic death is approximately six times higher among males than among females.

• Among males, the highest rate of motorcycle traffic death occurred among those ages 20 to 30 years; among females, the highest rate of death occurred among those ages 35 to 54 years.

Environmental & Natural Elements

Figure 23. Mortality by Environmental and Natural Elements, Kansas 2003-2007

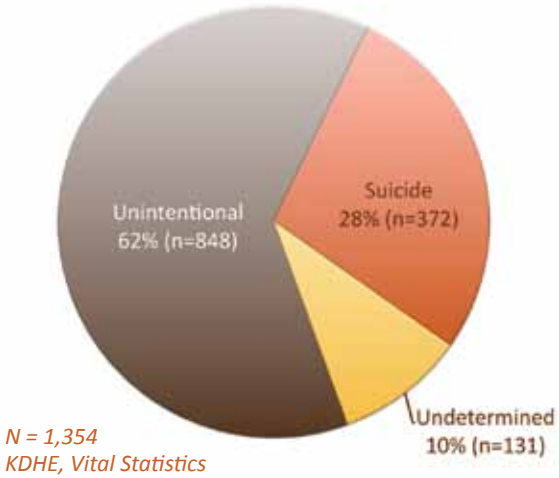


N = 75
KDHE, Vital Statistics

- Between 2003 and 2007, 75 Kansans died as a result of adverse environmental circumstance.
- Sixty-seven percent of the deaths in this category were due to excessive heat and excessive cold.
- Earth movement, such as, landslide and mudslide of cataclysmic nature claimed the lives of 15 Kansans between 2003 and 2007.

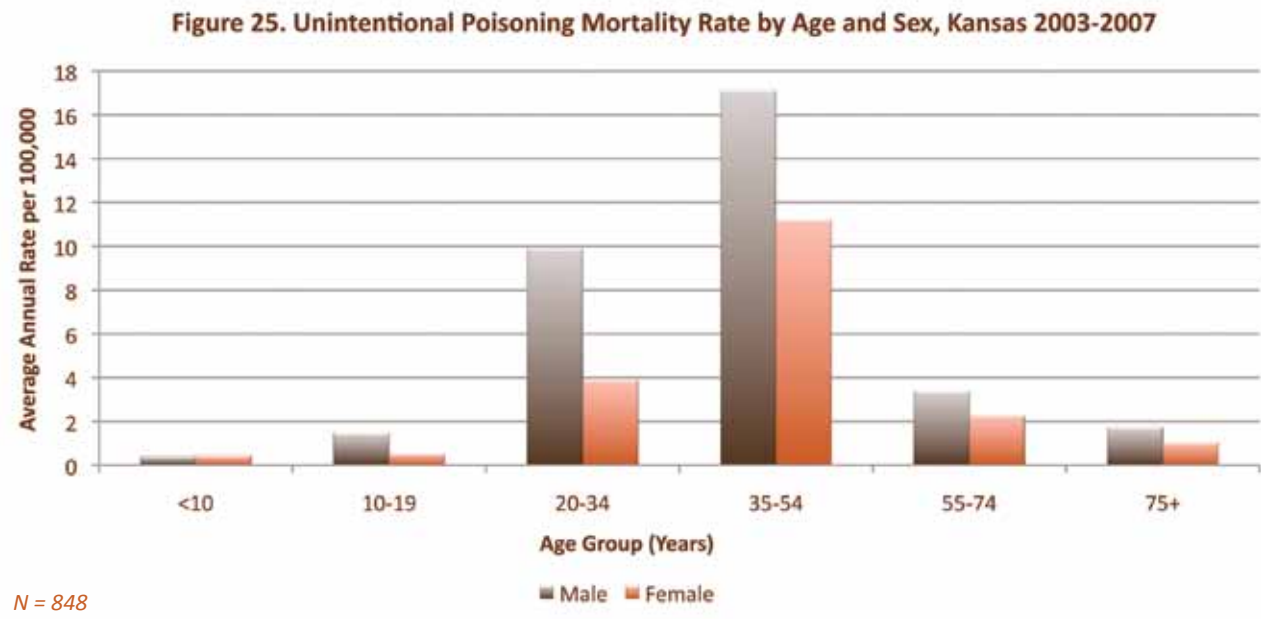
Poisoning

Figure 24. Mortality from Poisoning by Intent Kansas 2003-2007



N = 1,354
KDHE, Vital Statistics

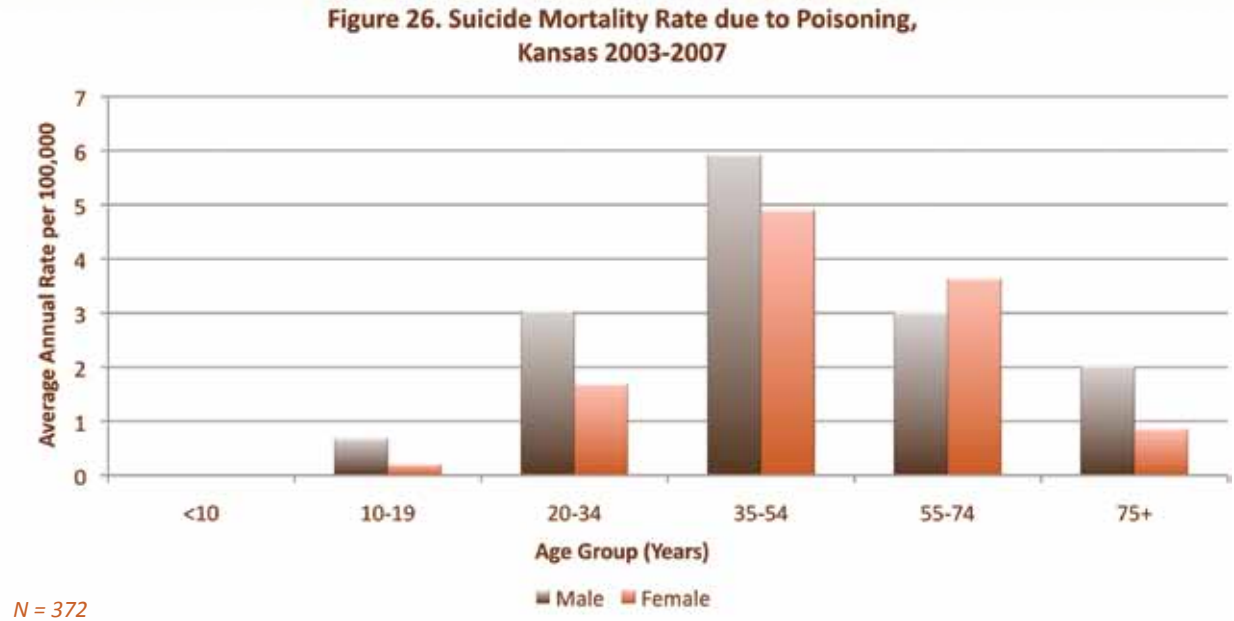
- Between 2003 and 2007, 1,354 Kansans died as a result of poisoning.
- Of the 1,354 Kansans who died of poisoning between 2003 and 2007, 62 percent (n=848) were due to unintentional poisonings.



N = 848
KDHE, Vital Statistics

• A total of 848 Kansans died as a result of unintentional poisoning between 2003 and 2007.

• The highest rate of death from unintentional poisoning occurred among Kansan ages 35 to 54 years.



N = 372
KDHE, Vital Statistics

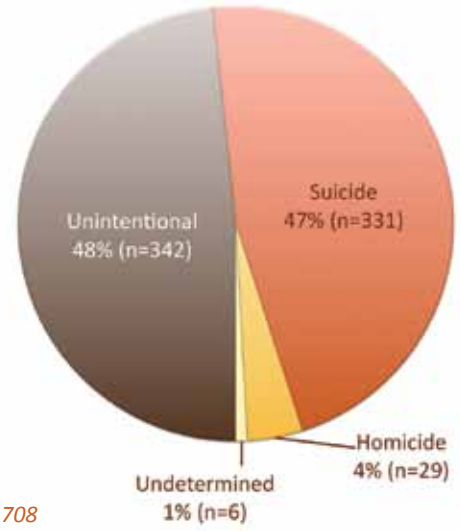
• Between 2003 and 2007, a total of 372 suicides in Kansans were due to poisoning.

• Highest rate of suicide poisoning deaths occurred among Kansans ages 35 to 54 years.

• Among Kansans ages 20 to 34 years, suicide-poisoning mortality was twice as high among males than among females.

Suffocation

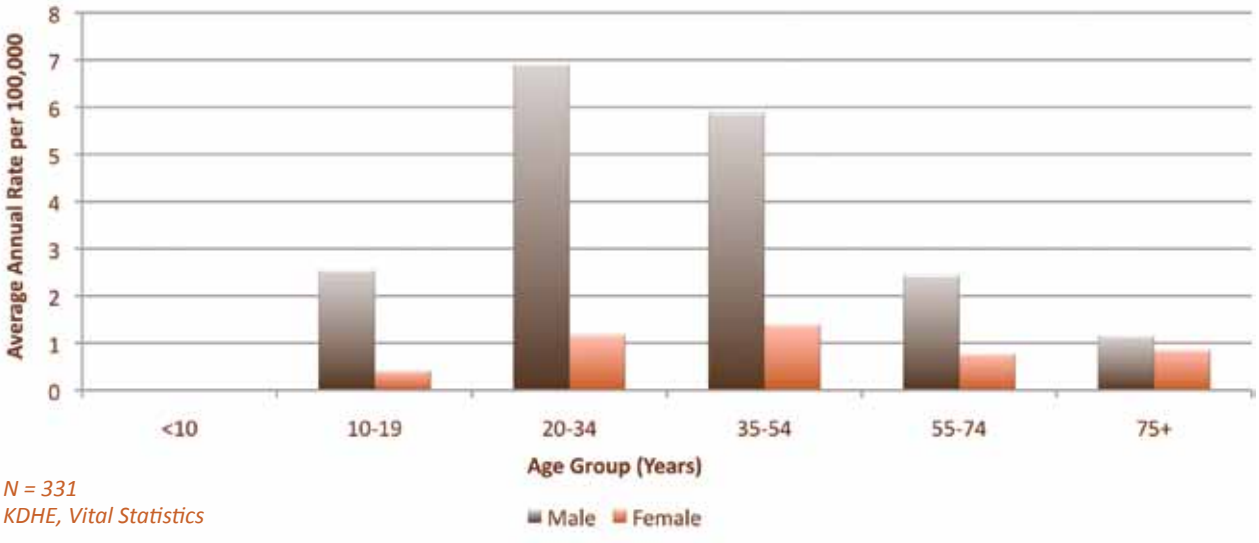
Figure 27. Mortality from Suffocation by Intent, Kansas 2003-2007



N = 708
KDHE Vital Statistics

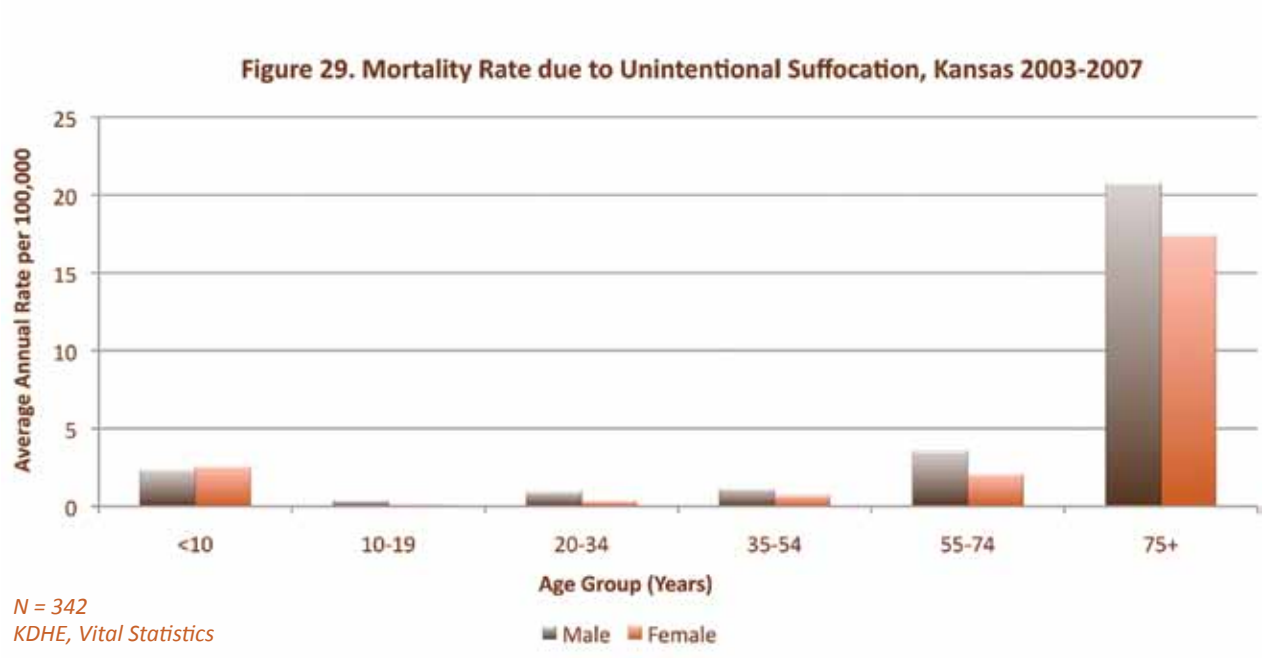
- Majority of the suffocation deaths (48 percent) were unintentional.
- Suicides were a large portion of the suffocation deaths (47 percent).

Figure 28. Suicide Mortality Rate due to Suffocation, Kansas 2003-2007



N = 331
KDHE, Vital Statistics

- Between 2003 and 2007, a total of 331 Kansans committed suicide by suffocation.
- The rate of suicide death by suffocation is approximately five times higher among males than among females.
- Death from suicide suffocation is highest among male Kansans ages 20 to 34 years (6.91 per 100,000 population).



N = 342
KDHE, Vital Statistics

- A total of 342 Kansans died from unintentional suffocation between 2003 and 2007.
- The rate of unintentional suffocation is highest among Kansans 75 years and older.
- Among Kansans age 75 years and older who died from unintentional suffocation, males died at a higher rate than females (2.72 vs. 2.04 per 100,000 population).

Appendix A:

Table 1. Number and Average Annual Rate of Injury Deaths per 100,000 population by Mechanism and Intent of Injury, Kansas 2003-2007

CAUSE/INTENT	Unintentional		Suicide		Homicide		Undetermined		Legal/War		Total	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Cut/Pierce	13	0.09	20	0.15	58	0.42	-	-	-	-	91	0.66
Drowning	151	1.10	7	0.05	1	0.01	6	0.04	-	-	165	1.20
Fall	1082	7.88	18	0.13	-	-	5	0.04	-	-	1105	8.05
Fire/Flame	172	1.25	13	0.09	11	0.08	4	0.03	-	-	200	1.46
Hot Object/Substance	10	0.07	-	-	-	-	-	-	-	-	10	0.07
Firearm	22	0.16	1020	7.43	364	2.65	7	0.05	22	0.16	1435	10.45
Machinery	65	0.47	-	-	-	-	-	-	-	-	65	0.47
Motor Vehicle Traffic	2314	16.86	-	-	-	-	-	-	-	-	2314	16.86
Other Pedal Cyclist	3	0.02	-	-	-	-	-	-	-	-	3	0.02
Other Pedestrian	29	0.21	-	-	-	-	-	-	-	-	29	0.21
Other Land Transport	65	0.47	21	0.15	2	0.01	2	0.01	-	-	90	0.66
Other Transport	38	0.28	-	-	-	-	-	-	-	-	38	0.28
Natural/Environment	96	0.70	-	-	-	-	-	-	-	-	96	0.70
Overexertion	1	0.01	-	-	-	-	-	-	-	-	1	0.01
Poisoning	848	6.18	372	2.71	3	0.02	131	0.95	-	-	1354	9.86
Struck By/Against	34	0.25	-	-	10	0.07	-	-	-	-	44	0.32
Suffocation	342	2.49	331	2.41	29	0.21	6	0.04	-	-	708	5.16
Other Specified	105	0.76	12	0.09	19	0.14	3	0.02	-	-	139	1.01
Not Else Where Classified	60	0.44	4	0.03	22	0.16	13	0.09	1	0.01	100	0.73
Not Specified	233	1.70	8	0.06	49	0.36	16	0.12	-	-	306	2.23
Water Transport Drowning	10	0.07	-	-	-	-	-	-	-	-	10	0.07
Total	**5693**	**41.48**	**1826**	**13.30**	**568**	**4.14**	**193**	**1.41**	**23**	**0.17**	**8303**	**60.49**

Table 2. Number and Average Annual Rate of Injury Deaths per 100, 000 population by Mechanism of Injury and Age Group (Years), Kansas 2003-2007

CAUSE/INTENT	<10		10-19		20-34		35-54		55-74		75+		Total	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Cut/Pierce	1	0.05	7	0.35	27	0.96	26	0.67	18	0.81	12	1.30	91	0.07
Drowning	37	1.94	18	0.91	32	1.14	39	1.01	22	0.99	17	1.84	165	0.12
Fall	7	0.37	6	0.30	21	0.75	93	2.40	193	8.70	785	84.74	1105	0.81
Fire/Flame	22	1.15	10	0.50	23	0.82	54	1.39	39	1.76	52	5.61	200	0.15
Hot Object/Substance	2	0.10	-	-	-	-	4	0.10	1	0.05	3	0.32	10	0.01
Firearm	5	0.26	126	6.35	440	15.67	497	12.81	236	10.64	131	14.14	1435	1.05
Machinery	2	0.10	3	0.15	6	0.21	21	0.54	18	0.81	15	1.62	65	0.05
Motor Vehicle Traffic	64	3.35	352	17.73	625	22.25	627	16.17	397	17.90	249	26.88	2314	1.69
Other Pedal Cyclist	-	-	-	-	-	-	2	0.05	-	-	1	0.11	3	0.00
Other Pedestrian	4	0.21	4	0.20	3	0.11	9	0.23	3	0.14	6	0.65	29	0.02
Other Land Transport	4	0.21	8	0.40	32	1.14	23	0.59	16	0.72	7	0.76	90	0.07
Other Transport	-	-	3	0.15	8	0.28	15	0.39	9	0.41	3	0.32	38	0.03
Natural/Environment	5	0.26	2	0.10	5	0.18	22	0.57	30	1.35	32	3.45	96	0.07
Overexertion	-	-	-	-	1	0.04	-	-	-	-	-	-	1	0.00
Poisoning	13	0.68	34	1.71	292	10.40	840	21.66	150	6.76	25	2.70	1354	0.99
Struck By/Against	4	0.21	2	0.10	4	0.14	18	0.46	14	0.63	2	0.22	44	0.03
Suffocation	51	2.67	39	1.96	143	5.09	187	4.82	104	4.69	184	19.86	708	0.52
Other Specified	24	1.26	5	0.25	30	1.07	46	1.19	22	0.99	12	1.30	139	0.10
Not Else Where Classified	3	0.16	4	0.20	7	0.25	24	0.62	19	0.86	43	4.64	100	0.07
Not Specified	8	0.42	7	0.35	19	0.68	40	1.03	43	1.94	189	20.40	306	0.22
Water Transport Drowning	-	-	3	0.15	4	0.14	3	0.08	-	-	-	-	10	0.01
Total	**256**	**13.40**	**633**	**31.89**	**1722**	**61.31**	**2590**	**66.78**	**1334**	**60.16**	**1768**	**190.86**	**8303**	**6.05**

Appendix: External Cause of Injury M

MECHANISM	Intent					
	All Injury	Unintentional	Suicide	Homicide	Undetermined	Legal Intervention
All Injury	V01-Y36, Y85-Y87, Y89, *U01-U03	V01-X59, Y85-Y86	X60-X84, Y87.0, *U03	X85-Y09, Y87.1, *U01-U02	Y10-Y34, Y87.2, Y89.9	Y35-Y36, Y89 (.0,1)
Cut/Pierce	W25-W29, W45, X78, X99, Y28, Y35.4	W25-W29, W45	X78	X99	Y28	Y35.4
Drowning	W65-W74, X71, X92, Y21	W65-W74	X71	X92	Y21	
Fall	W00-W19, X80, Y01, Y30	W00-W19	X80	Y01	Y30	
Fire/hot object or substances	X00-X19, X76-X77, X97-X98, Y26-Y27, Y36.3, *U01.3	X00-X19	X76-X77	X97-X98, U*01.3	Y26-Y27	Y36.3
Fire/Flame	X00-X09, X76, X97, Y26	X00-X09	X76	X97	Y26	
Hot Objects/substances	X10-X19, X77, X98, Y27	X10-X19	X77	X98	Y27	
Firearm	W32-W34, X72-X74, X93-X95, Y22-Y24, Y35.0, *U01.4	W32-W34	X72-X74	X93-X95, *U01.4	Y22-Y24	Y35.0
Machinery	W24, W30-W31	W24, W30-W31				
All Transport	V01-V99, X82, Y03, Y32, Y36.1, *U01.1		X82	Y03, *U01.1	Y32	Y36.1
Motor Vehicle Traffic						
Occupant	V30-V39 (.4-.9)	V30-V39 (.4-.9)				
	V40-V49 (.4-.9)	V40-V49 (.4-.9)				
	V50-V59 (.4-.9)	V50-V59 (.4-.9)				
	V60-V69 (.4-.9)	V60-V69 (.4-.9)				
	V70-V79 (.4-.9)	V70-V79 (.4-.9)				
	V83-V86 (.0-.3)	V83-V86 (.0-.3)				
Motorcyclist	V20-V28 (.3-.9), V29 (.4-.9)	V20-V28 (.3-.9), V29 (.4-.9)				
Pedal Cyclist	V12-V14 (.3-.9), V19 (.4-.9)	V12-V14 (.3-.9), V19 (.4-.9)				
Pedestrian	V02-V04 (.1-.9) V09.2	V02-V04 (.1-.9) V09.2				
Other	V80 (.3-.5), V81.1, V82.1	V80 (.3-.5), V81.1, V82.1				
Unspecified	V87 (.0-.8), V89.2	V87 (.0-.8), V89.2				
Pedal cyclist, Other	V10-V11, V12-V14 (.0-.2)	V10-V11, V12-V14 (.0-.2)				
	V15-V18, V19 (.0-.3, .8, .9)	V15-V18, V19 (.0-.3, .8, .9)				
Pedestrian, Other	V01, V02-V04 (.0), V05, V06,	V01, V02-V04 (.0), V05, V06,				
	V09 (.0,.1,.3,.9)	V09 (.0,.1,.3,.9)				

ortality Matrix for ICD-10.

Continued

MECHANISM	Intent					
	All Injury	Unintentional	Suicide	Homicide	Undetermined	Legal Intervention
Other land transport	V20-V28 (.0-.2), V29 (.0-.3)	V20-V28 (.0-.2), V29 (.0-.3)				
	V30-V39 (.0-3)	V30-V39 (.0-3)				
	V40-V49 (.0-3)	V40-V49 (.0-3)				
	V50-V59 (.0-3)	V50-V59 (.0-3)				
	V60-V69 (.0-3)	V60-V69 (.0-3)				
	V70-V79 (.0-3)	V70-V79 (.0-3)				
	V80 (.0-2, .6-.9)	V80 (.0-2, .6-.9)				
	V81-V82 (.0,.2-.9)	V81-V82 (.0,.2-.9)				
	V83-V86 (.4-.9)	V83-V86 (.4-.9)				
	V87.9	V87.9				
	V88 (.0-.9)	V88 (.0-.9)				
	V89 (.0, .1, .3, .9), X82, Y03, Y32	V89 (.0, .1, .3, .9)	X82	Y03	Y32	
Other transport	V90-V99, Y36.1, *U01.1	V90-V99		*U01.1		Y36.1
Natural/ Environment	W42, W43, W53-W64	W42, W43, W53-W64				
	W92-W99, X20-X39, X51-X57	W92-W99, X20-X39, X51-X57				
Overexertion	X50	X50				
Poisoning	X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2, *U01(.6-.7)	X40-X49	X60-X69	X85-X90, *U01.6-.7	Y10-Y19	Y35.2
Struck by or against	W20-W22, W50-W52, X79, Y00, Y04, Y29, Y35.3	W20-W22, W50-W52	X79	Y00-Y04	Y29	Y35.3
Suffocation	W75-W84, X70, X91, Y20	W75-W84	X70	X91	Y20	
Other specified, classified	W23, W35-W41, W44, W49, W85-W91, Y85	W23, W35-W41, W44	X75, X81, *U03.0	X96, Y02, Y05-Y07		
	X75, X81, X96, Y02, Y05-Y07, Y25, Y31	W49, W85-W91, Y85		*U01.0,.2,.5		
	Y35 (.1,.5), Y36(.0,.2,.4-.8), *U01.0, .2, .5, *U03.0					
Other specified, nec	X58, Y86, X83, Y87.0, Y08, Y87.1, Y33, Y87.2,	X58, Y86	X83, Y87.0	Y08, Y87.1, *U01.8, *U02	Y33, Y87.2	Y35.6, Y89 (.0,1)
	Y35.6, Y89 (.0,1), *U01.8, *U02					
Unspecified	X59, X84, Y09, Y34, Y89.9, Y35.7, Y36.9, *U01.9, *U03.9	X59	X84, *U03.9	Y09, *U01.9	Y34, Y89.9	Y35.7, Y36.9
Adverse effects	Y40-Y59, Y60-Y84, Y88					
Drugs	Y40-Y59, Y88.0					
Medical Care	Y60-Y84, Y88 (.1-.3)					

Continued

MECHANISM	Intent					
	All Injury	Unintentional	Suicide	Homicide	Undetermined	Legal Intervention/War
ICD-10 Transportation Codes All Motor Vehicle Accidents combine motor vehicle traffic and non-traffic Motor vehicle accidents codes are equivalent to codes in the NCHS 113 Cause of death list						
Motor vehicle accidents						
Motor Vehicle traffic						
Occupant	V30-39 (.4-.9)					
Occupant	V40”					
Occupant	V50”					
Occupant	V60”					
Occupant	V70”					
Occupant	V83-V86 (.0-.3)					
Motor cyclist	V20-V28 (.3-.9), V29 (.4-.9)					
Pedal cyclist	V12-V14 (.3-.9), V19 (.4-.6)					
Pedestrian	V02-V04 (.1, 9), V09.2					
Other	V80 (.3-.5), V81.1, V82.1					
Unspecified	V87 (.0-.8), V89.2					
Motor Vehicle non-Traffic						
Pedestrian, mv-nt	V09.0, V02-V04 (.0)					
Pedal cyclist, mv-nt	V12-V14 (.0-.2), V19 (.0-.2)					
Other mv-nt	V20-V28 (.0-.2), V29 (.0-.3)					
	V30-V39 (.0-.3)					
	V40-V49 (.0-.3)					
	V50-V59 (.0-.3)					
	V60-V69 (.0-.3)					
	V70-V79 (.0-.3)					
	V81.0, V82.0					
	V83-V86 (.4-.9)					
	V88 (.0-.8)					
	V89.0					
Other land transport						
Pedestrian, non-motor vehicle	V01, V05, V06, V09 (.1, .3, .9)					
Pedal cyclist, non-motor vehicle	V10, V11, V15-V18, V19 (.3,.8,.9)					
Animal rider or occupant of animal drawn vehicle	V80 (.0-.2, .6-.9)					
Occupant of railway train or railway vehicle	V81 (.2-.9)					
Occupant of streetcar	V82 (.2-.9)					
Other and unspecified	V87-V88 (.9), V89 (.1,.3,.9), X82, Y03, Y32					
Other Transport						
Accidents to or on watercraft (other than drowning)	V91-, V93					
Transport-related drowning	V90, V92					
Other & unspecified water transport accidents	V94					
Air and space transport accidents	V95-V97					
Other and unspecified transport accidents	V98-V99, Y36.1, *U01.1					

Source: Center for Disease Control and Prevention. (2006). ICD-10 Framework for Presenting Injury Mortality Data – External Cause, 2002. Retrieved February 9, 2006, from http://www.cdc.gov/nchs/data/ice/icd10_transcode.pdf

Funding levels need to reflect the importance of injury as a major cause of death and ill-health in children.

"Those who control the purse strings must be persuaded that most injuries are truly preventable and that the cost of failing to do so greatly outweighs the relatively small costs of prevention."

B. Pless, Injury Prevention, 1998

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